



The Boat House, Church Cove, Lizard,
Helston, Cornwall, TR12 7PH

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Table of Contents

Summary	3
1. Introduction	4
2. Methodology	4
2.1 Desk study	4
2.2 Field survey	4
2.3 Bat survey	4
2.4 Report	4
2.5 Limitations	5
3. Ecological description and evaluation	6
3.1 Survey area description	6
3.2 Designated sites	6
3.3 Habitats	6
3.4 Species	11
4. Recommendations	15
4.1 Legislation/policy and mitigation	15
4.2 Potential for site enhancement	17
5. References	18
Appendix 1: Map 1 Phase 1 Habitat Distribution	20
Appendix 2: Species list	23

Summary

Cove Ecological Surveys was commissioned in April 2024 to undertake a PEA of land at Lamorna, TR19 6XQ. The survey area (c.300sqm) includes garage, a shed and part of steep valey-side adjacent and below the buildings (to the north) supporting woodland and scrub. It is proposed to demolish the existing buildings and install shepherd hut to be used as a holiday let as shown on plans supplied by the client (drawing 102, as prepared by Draw Architecture, dated 28.07.2021 and drawing 201, as prepared by Draw Architecture, dated 08.04.2024).

As walkover survey was undertaken in accordance with standard guidelines (JNCC, 2010) on 30 April 2024 by John Sproull MSC, MCIEEM. Plant species and habitats present were recorded and mapped. A preliminary search for signs of protected/ notable faunal species was also undertaken.

This report describes and evaluates ecological features within the proposed development site and provides an account of baseline conditions. Anticipated ecological impacts of the proposed development (based upon the proposal as described by the client) are then assessed and recommendations are made for mitigation (including any need for further surveys).

The site lies within a County Wildlife Site and includes hedges, scattered trees and woodland of conservation value and is assessed as of potential value for lower plants, bats, Hedgehog, Otter, birds and invertebrates.

The invasive species Montbretia, Three-cornered Leek, Rhododendron and Winter Heliotrope are present within the site.

A tree survey is required to quantify the tree loss and further work is required to assess the value of the site for bats.

Without care the proposed development has the potential to result in degradation / disturbance to hedges, scattered trees and woodland, loss of a bat roost, disturbance to bats, nesting birds and Hedgehog and the spread of invasive species.

Recommendations for mitigation include:

- Develop detailed plans for the development of the site using the recommendations within this report.
- Commission a desk study search to provide details of the CWS designation and records of notable and / or protected species occurring within a 1km radius of the site to inform and update the findings of this report (as required).
- Retain, fence off and buffer important hedges and incorporate new native hedges within the scheme where possible
- Undertake vegetation clearance during the winter months (1 October to end of February). If this is not practicable, an ecologist must carry out a search of the vegetation by hand, immediately before clearance.
- Follow guidance in the tree survey report: fence off site with appropriate fencing to establish adequate root protection zones for retained trees to ensure long term viability.
- Take action to avoid spreading invasive species
- Mitigation for bats will be provided following further survey work: further bat survey work may be required.

Recommendations for site enhancement are given in *Section 4* as summarised below:

- Develop a landscape plan to include the construction / planting of new native hedges, trees and shrubs and/or species of known wildlife value to provide a varied range of nectar sources and foraging opportunities for faunal species and bird nesting habitat.
- Consider providing bird / bat boxes and bee bricks etc within appropriate locations
- Develop a strategy to monitor and control the extent of alien invasive species within the surrounding woodland CWS.

1. INTRODUCTION

Cove Ecological Surveys was commissioned in April 2024 to undertake a PEA of land at Lamorna, TR19 6XQ. The survey area (c.300sqm) includes garage, a shed and part of steep valey-side adjacent and below the buildings (to the north) supporting woodland and scrub. It is proposed to demolish the existing buildings and install shepherd hut to be used as a holiday let as shown on plans supplied by the client (drawing 102, as prepared by Draw Architecture, dated 28.07.2021 and drawing 201, as prepared by Draw Architecture, dated 08.04.2024).

This report seeks to describe and evaluate the baseline ecological conditions within the site at the time of the site survey and assess the likely ecological impact of the proposal. Recommendations for further ecological surveys and mitigation will be made (if appropriate). This report should be used (as required) to inform the development of site proposals such that negative ecological impacts are avoided and/or minimised wherever possible. Where further surveys are recommended an update or addendum to this report may be required before submission to planning. The local authority is generally unable to condition ecological surveys and will normally be unable to determine an application for planning permission until all surveys have been completed.

2. METHODOLOGY

This assessment has been carried out in accordance with the 'Guidelines for Preliminary Ecological Appraisal' produced by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017). It comprises three elements: a desk study, a PEA site survey and a report, as detailed below.

2.1 Desk Study

A desk study search for designated sites of nature conservation interest within a 1km radius of the site centred at approximately SW449241 was undertaken using the information available on Nature on the Map (MAGIC) (DEFRA, 2020) to search for statutory sites (such as Sites of Special Scientific Interest) and the Cornwall Council Interactive Map (Cornwall Council, 2020) to search for non-statutory sites (such as County Wildlife Sites).

2.2 Field Survey

A walkover survey was undertaken in accordance with standard Phase 1 Habitat Survey guidelines (JNCC, 2010) on 30 April 2024 by an experienced ecologist, John Sproull MSC, MCIEEM. Plant species and habitats present within the development site were recorded and mapped. A preliminary search for signs of protected and/or notable faunal (such as tracks, prints, hairs, droppings, nests and burrows) was also undertaken.

2.3 Report

This report is written by John Sproull MSc, MCIEEM. It describes and evaluates ecological features within the proposed development site and provides an account of existing baseline conditions at the time of the site visit. Anticipated ecological impacts of the proposed development are then assessed and recommendations are made for their mitigation (including any need for further survey). Possible enhancements are also detailed.

The biodiversity value of ecological features and resources is evaluated according to various characteristics such as designation, rarity, threat, species-richness, etc. based on the Guidelines for Ecological Impact

Assessment (CIEEM 2018). Based on such characteristics, each ecological feature is assigned a biodiversity value using a geographic scale:

International

National

County

District

Local

Initial assessment of anticipated biodiversity net gain / loss resulting from the proposal is made based upon comparison of the baseline Phase 1 Habitat distribution (Map 1) with proposals for the site (as shown on plans supplied by the client) using professional judgement. Following Cornwall Council guidelines (2020) the proposed development falls below the stated threshold for major development for which use of the Biodiversity Metric Calculation Tool is required.

2.4 Limitations

The assessment is based upon a site visit undertaken during April 2024; the findings of the survey concern the condition of the site as it appeared on the day of the visit. This is an acceptable time of year to undertake this type of survey but it is acknowledged that later flowering plant species will not be visible or readily identifiable at this stage in the year. The weather at the time of the survey was wet with persistent light rain and a moderate south-easterly wind with temperatures in line with seasonal norms.

It was not possible to access the whole of the site during the survey; the garage was locked but the interior was viewed through the window as far as possible. The valley side immediately below the buildings is densely vegetated, steep, with a number of shear rock exposures and the ground was slippery. Access was gained to the immediate surrounding area around the buildings as well as to the valley bottom below (to the north) but the wider valley-side to the east and south-east was not accessed. This is considered sufficient to carry out the present initial assessment of the ecological value of the proposed development site but it is acknowledged that it remains possible that further ecological features could be present within the site which were not seen during the survey. **Further survey work is recommended to more fully assess the site for bats.**

A full desk study search for records of notable species occurring within close proximity to the site as held by ERCCIS (the Environmental Records Centre for Cornwall and the Isles of Scilly) has not been undertaken. Given that the site lies within a County Wildlife Site **it is recommended that this data should be procured in tandem with further recommended survey work and the findings of this report reviewed as required.**

As a guide it is suggested that this report should remain valid for 18 months from the date of survey. If work does not start on the development site during this period the report should be updated.

Amenity based designations including Tree Preservation Orders (TPO's) and Conservation Area status are beyond the scope of this ecological report.

3. ECOLOGICAL DESCRIPTION AND EVALUATION

3.1 Survey area description

The survey area comprises two buildings (a garage and associated shed) and part of the steep wooded valley-side below (to the north). Also included is a short section of garden hedge, a roadside hedge and a stream within the valley bottom (not surveyed in detail). The buildings lie adjacent to a private road giving access to Lamorna Cove which lies c.150m to the south-east. The road runs along a steep-sided wooded valley; Lamorna village is situated c.350m further up the valley to the north-west. The surrounding landscape is primarily agricultural (dairy pasture with some arable); there are extensive areas of maritime cliff and slope habitat around the coast and abandoned granite quarry spoil tips at the mouth of the valley c.200m to the north-east of the site; Penzance lies c.6.5km to the north.

3.2 Designated Sites

There is one non-statutory designated site of nature conservation interest within a 1km radius of the site:

Lamorna Cove to Methern Point County Wildlife Site (CWS) – the site lies within this CWS. CWS's are non-statutory sites considered to be of county value for supporting a range of important semi-natural habitats and notable species.

Further information is required to determine the potential for a negative impact upon the CWS resulting from the proposal. It is recommended that details relating to the site designation are procured as part of a desk study data search in tandem with further recommended survey work.

3.3 Habitats

Phase 1 habitats recorded within the site are briefly described below with reference to the annotated plan (included with this report as *Map 1, Appendix 1*). A list of the species recorded within each habitat is included in *Appendix 2*.

3.3.1 Buildings

The garage is a single storey block-built structure measuring c.4m x 6m, rendered on all sides with a double pitched roof, wooden shingles (some loose and / or missing) on the gable ends and an 'up-and-over' metal garage door giving access from the road on the south-eastern aspect (see *photo 1*). The roof appears to be mostly weather-proof but is in a poor state of repair; it is composed of fibrous corrugated sheets which have been covered on the outside with plastic sheeting affixed with wooden batons (see *photo 2* below). The garage was locked at the time of the survey. There is a window on the northern aspect allowing light penetration to the interior which could not be accessed. The building is assumed to have been previously used to store a car and was empty at the time of the survey.

The shed is situated to the west of the garage, it measures c.3m x 5m and consists of a timber frame clad in corrugated tin sheeting with a single pitched roof and double wooden doors. It is in a very poor state of repair with the southern wall partially missing allowing daylight penetration into the interior. It was empty at the time of the survey.

The buildings are considered to have some potential for roosting bats and will be demolished as part of the proposal – there is therefore potential for a negative impact upon bats (if present). **The buildings should therefore be inspected by a bat ecologist to more fully assess their value for bats and assess the need for**

further work as required following the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016).



Photo 1: garage south-eastern aspect



Photo 2: garage and shed from the west

3.3.2 Scattered trees

There are several moderately sized trees including a number of Ash *Fraxinus excelsior* and Sycamore *Acer pseudoplatanus* directly adjacent to the buildings (and visible in *photo 3* below), as shown on *Map 1*. The

trees form canopies up to c.10m high and some support light coverings of ivy; they are likely to provide shelter and potential nesting / foraging habitat for faunal species such as birds and could also have some potential for roosting bats.

The trees within the site are assessed as of **conservation value within the immediate vicinity**. Available plans do not show which, if any, trees are to be retained and / or removed. It is not known if the footprint of the new building will be the same as the existing garage and shed or to what extent new foundations will be required. It is recommended that detailed plans are developed to show this and that a qualified arboriculturalist is commissioned to carry out a tree survey to assess trees to retained / removed. Trees should also be assessed for their potential to support bats (see below).

At this stage it appears that there is some potential for the trees closest to the footprint of the building to be impacted and / or to require felling; the extent of the impact is to be determined.



Photo 3: Showing scattered trees surrounding the existing buildings

3.3.3 Hedges

Hedges are shown on *Map 1* as H1 & H2.

H1 is a low shrub hedge on the roadside to the west of the shed composed of the garden species Evergreen Spindle *Euonymus japonicus*. Winter Heliotrope *Petasites fragrans* dominates the ground flora immediately to the west of the hedge.

H2 lies parallel to H1 on the other side of the road (beyond the red line boundary) and is a stone-faced Cornish hedge-bank which retains the land above. The top is planted with garden shrubs including Hydrangea *Hydrangea* cultivars (CVs) and Rhododendron *Rhododendron* CVs and also supports small trees including Sycamore and Ash. The ground flora includes abundant Atlantic Ivy *Hedera atlantica* and Three-cornered Leek *Allium triquetrum*, locally abundant Winter Heliotrope and locally frequent Montbretia *Crocsmia xcrocsmiiflora*. Also present are native woodland species such as Herb Robert *Geranium robertianum*, Navelwort *Umbilicus rupestris* and Lords-and-ladies *Arum maculatum*.

Hedges in general can provide important habitat for faunal species and serve as corridors connecting areas of semi-natural habitat allowing wildlife to move through otherwise developed areas. H1 is species poor but may provide shelter and nesting habitat for nesting birds; H2 is more species-rich (but contains several invasive alien species, see below). The hedges are assessed as of **conservation value within the immediate vicinity**.



Photo 4: H1



Photo 5: H2

It is assumed that the hedges will be retained and that there will be no loss of this habitat as a result of the proposed development. There is, however, some potential for degradation of the hedgerows during site clearance and construction resulting from vehicle / machinery movements, storage of materials and building placement.

3.3.4 Woodland (including rock exposures and stream)

The valley-side below and to the north of the buildings supports rather poorly developed, open, scrubby woodland dominated by Ash and Sycamore forming a canopy up to c. 15m high. The trees appear even-aged and there is little or no shrub layer beyond scattered garden species including Camellia *Camellia*, Rhododendron, Hydrangea and Evergreen Spindle. Bramble *Rubus fruticosus* and Atlantic Ivy are abundant. Winter Heliotrope is locally frequent, Three-cornered Leek is occasional, Bluebell *Hyacinthoides non-scripta*, Navelwort, Tutsan *Hypericum androsaemum* and Herb Robert are rare.



Photo 6: woodland below the buildings

Immediately below (to the north) of the shed there is a large shear rock exposure of natural granite (at least c.10m high, see *photo 7*). A series of deep vertical and horizontal crevices support Atlantic Ivy and locally abundant bryophytes (mosses and liverworts).

A stream runs along the valley bottom (*photo 8*); the flow was moderate on the day of the survey and the channel up to c.1m wide and 0.3m deep; the stream-bed is rocky with frequent granite blocks creating frequent turbulence and small pools. Montbretia is notably locally abundant on the stream banks (the corms presumably being carried down-stream from the surrounding area).

The woodland contains a high number of introduced garden and invasive species and shows limited structural development, as such, it is considered to be in sub-optimal condition. Nevertheless, it is designated as part of a County Wildlife Site, appears little visited and provides potential habitat for a range of notable and / or protected species including flowering and non-flowering plants as well as faunal species such as bats, badger and birds. In consequence the area surveyed is assessed as of *at least local conservation value*.

Without care, there may be some potential for degradation to the surrounding woodland (including the rock face and stream) resulting from factors such as tree loss, excavation to create foundations, sewerage

provision, run-off, etc. during construction and increased lighting and human access once the property is occupied. Detailed plans should be developed (informed by further survey work recommended in this report) to enable the potential impacts to be quantified (initial precautionary recommendations are provided below).

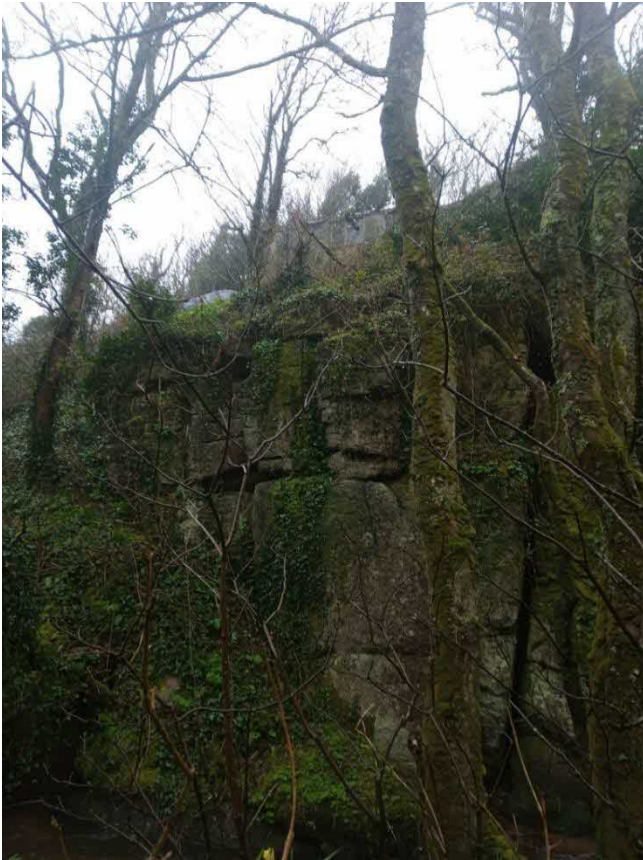


Photo 7: rock exposure within woodland with garage visible in centre background



Photo 8: stream in valley bottom

3.4 Species

3.4.1 Flowering Plants

In total 35 plant species were recorded during the site visit; no notable species were recorded, the site was not noted to be particularly species rich but it is acknowledged that a site visit at a more optimal time of year would be likely to record additional species not visible during the survey. At this stage the site is **not considered to be of particular value for this group**, however desk study data should be checked for records of notable species from within the CWS.

3.4.2 Non-flowering Plants

A dedicated survey of bryophytes (mosses and liverworts) was beyond the scope of the survey. Bryophytes were noted to be locally abundant within the woodland, both epiphytic species growing on trees and terrestrial species, particularly on the rocks within the valley bottom and on the cliff face below the garage. Common species recorded as locally abundant included Dotted Thyme-moss *Rhyzomnium punctatum*, Common Feather-moss *Kindbergia praelonga*, Common Tamarisk-moss *Thuidium tamariscinum* and Fox-tail Feather-moss *Thamnobryum alopecurum*. Rock crevices within the woodland and valley bottom may have some potential for notable species; desk study records should be checked for the nearest known records of notable species. The site is considered to be of value at least within the **immediate vicinity for bryophytes**. A negative impact upon the woodland could impact this group.

3.4.3 Invasive Plants

Three-cornered Leek, Montbretia and Rhododendron are present within the survey area as described above (see also *Map 1*). These species are listed on Schedule 9 of the Wildlife and Countryside Act making it an offence to “cause [them] to spread in the wild”. Winter Heliotrope, is also present (as described above). This species although not listed on Schedule 9 is nevertheless locally invasive in Cornwall and can dominate at the expense of other more desirable native species if allowed to spread unchecked.



Photo 9: Winter Heliotrope (background left) to north of garage



Photo 10: Montbretia (centre) and Rhododendron (left) within valley bottom

3.4.4 *Badger*

No signs of Badger *Meles meles* were recorded during the survey but potential mammal tracks were visible running through the vegetation within the woodland to the north, downslope of the buildings. Badger is likely to be resident in the local area and may occasionally pass through the site but the site is **not considered to be importance for this species** (see precautionary advice below).

Badgers are widespread and common in Cornwall. Badgers and their setts are legally protected under the Protection of Badgers Act 1992 (HM Government, 1992).

3.4.5 *Bats*

Buildings are as described above; they are considered to have some potential for bats. Access to the interior of the garage is required to enable a bat ecologist to undertake a more thorough visual inspection to check for signs of and potential for bats within the site. Surrounding scattered trees may also hold some potential for this group and the wooded valley and sheltered access road are also likely to be used by bats foraging in the area. These features should be more fully considered as part of the bat survey following the Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016).

At this stage the site is considered likely to be of value to roosting and foraging bats **at least within the immediate vicinity**.

It is proposed to demolish the existing building which will clearly mean loss of the existing roost potential for this group. Without care lighting of the site could also affect bats continued ability to forage around the area.

All British bats are European Protected Species (EPS)¹, listed under Annex IV (a) of the EC Habitats Directive and legally protected under of the Conservation of Habitats and Species Regulations 2010

¹ Although the UK exited the EU on 31 January 2020 EU wildlife legislation and policy continues to be followed at the present time and all European protected sites and species retain the same level of protection.

(Conservation Regulations) as well as the Wildlife and Countryside Act (as amended by the Countryside and Rights of Way Act 2000).

3.4.6 Hedgehog

Hedgehog *Erinaceus europaeus* could potentially occur within the site nesting and / or hibernating within the woodland and hedges. Although formerly common, this species is in decline due to the loss of suitable habitat and is listed on the UK and Cornwall BAPs as a priority species for conservation. The site is therefore considered to be potentially of **value to this species within the immediate vicinity**.

If present, Hedgehog could be negatively impacted during site clearance and any work affecting the hedges.

3.4.7 Otter

No signs of Otter *Lutra lutra* were recorded during the survey but the stream provided some suitable habitat for this species which could be present in the area and on occasions pass through / in close proximity to the site. Desk study data should be procured and checked for records for this species. At this stage the site is assessed as of **potential importance for otter within the immediate vicinity**.

Otters and their resting places are legally protected under the Conservation Regulations 2010 and are a S41 / BAP priority species for conservation.

3.4.8 Other Mammals

There is no suitable habitat within the site for other protected and/or notable mammal species (such as Dormouse *Muscardinus avellanarius* or Harvest Mouse *Micromys minutus*). The site is therefore considered to be of **no importance for these species**.

3.4.9 Birds

Bird species seen and/or heard in the area included Robin *Erithacus rubecula* and Great Tit *Parus major*. A dedicated bird survey was beyond the remit of the survey and this merely reflects the species that were conspicuous within the site.

The scattered trees, woodland and hedges have the potential to be used by nesting and foraging birds, including potentially notable but common and widespread species.

All birds are legally protected whilst nesting under the Wildlife & Countryside Act 1981, as amended. The site is considered to be of **value to birds within the immediate vicinity**.

Without mitigation, vegetation clearance (such as cutting back and / or removal of H1 and / or scattered trees) could impact nesting birds.

3.4.10 Reptiles and Amphibians

The site is in general sub-optimal for reptiles being too overgrown but could support low numbers of the more common and widespread species of amphibian such as Common Frog *Rana temporaria* and Common Toad *Bufo bufo* which could shelter and / or hibernate here.

The site is **not considered to be important for these groups** but a precautionary approach should be taken during site clearance.

Common Toad is a priority S41 species; all amphibians are partially protected under the Wildlife and Countryside Act 1981.

3.4.11 Invertebrates

No invertebrate species were recorded during the survey. The woodland, scattered trees and hedges are likely to support a suite of invertebrates and the site is assessed as of **value for this group within the immediate**

vicinity. The potential for significant impacts upon this group will depend upon the extent of impacts upon the habitats listed above and is therefore to be determined.

4 RECOMMENDATIONS

4.1 Relevant legislation/policy and recommended mitigation

Based upon the above evaluation of the ecological features within the site and assessment of likely ecological impacts of the proposed development the following mitigation is recommended. Key relevant legislation/policy is highlighted to provide context.

4.1.1 General

Develop plans for the proposal following the recommendations within this report for the layout of the site and specification of works. The findings of this report may need to be revised once this information becomes available.

Commission a desk study search to provide details of the Lamorna Cove to Methern Point County Wildlife Site designation and records of notable and / or protected species occurring within a 1km radius as held by Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS) to inform and update the findings of this report (as required).

4.1.2 Hedges

Local authorities have a duty to further the conservation of UK S41/BAP priority habitats under Section 74 of the Countryside and Rights of Way (**CROW**) Act 2000 and to protect, restore, re-create and aid recovery of these habitats under the **National Planning Policy Framework** (NPPF, 2021)². The Natural Environment and Rural Communities (**NERC**) Act (HM Government, 2006) also confers a legal duty on every public authority to conserve biodiversity under Section 40(1). **Cornwall Council Planning for Biodiversity Guide** (Cornwall Council, 2018) sets out what the planning department expects from applicants when considering potential impacts upon biodiversity.

If H1 is to be removed it should be replaced by a native hedge or Cornish hedge planted with native species, such as Hawthorn *Crataegus monogyna*, Blackthorn *Prunus spinosa* and Hazel *Corylus avellana*. Any potential for additional hedgerow planting / construction within the site should be pursued and this should be shown on more detailed plans to be developed for the proposal.

Plan construction such that H2 can be protected to prevent any degradation to the hedgerow habitat resulting from vehicle movements, storage of materials, accidental release of pollutants, etc and remain unaffected by the proposal.

If required, any vegetation trimming along hedges should be undertaken during the winter (outside the bird nesting season).

4.1.3 Scattered Trees

Local authorities have a duty to further the conservation of UK S41/BAP priority habitats and species under Section 74 of the Countryside and Rights of Way (**CROW**) Act 2000 and to protect, restore, re-create and aid recovery of these habitats under the **National Planning Policy Framework** (NPPF, 2021). The Natural Environment and Rural Communities (**NERC**) Act (HM Government, 2006) also confers a legal duty on every public authority to conserve biodiversity under Section 40(1). **Cornwall Council Biodiversity Supplementary Planning Document (SPD)**, (Cornwall Council, 2018) sets out what the planning

² Applies to H1 only

department expects from applicants when considering potential impacts upon biodiversity.

Commission a tree survey to BS5837 (2012) to establish which trees, if any, may need to be felled and / or substantially pruned. Recommendations within the resultant report should be followed and the site fenced off with appropriate fencing to establish adequate root protection zones for retained trees to minimise compaction and root disturbance during construction and ensure their long term viability.

4.1.4 *Invasive species*

It is illegal to cause species listed on Schedule 9 of the **Wildlife and Countryside Act** to “spread in the wild”.

Care should be taken during site clearance not to inadvertently cause the spread of Three-cornered Leek, Montbretia and Rhododendron as well as Winter Heliotrope. Arisings containing the rhizomes, bulbs and seeds of these species should be retained within the site or these species should be appropriately treated (either with herbicide or dug up and allowed to desiccate in a designated area) prior to removal. Cove Ecological Surveys can provide further help in identifying and demarcating these species on the ground prior to the start of work as required.

4.1.5 *Bats*

Local authorities have a duty to further the conservation of UK S41/BAP priority habitats and species under Section 74 of the Countryside and Rights of Way (**CROW**) Act 2000 and to protect, restore, re-create and aid recovery of these habitats under the **National Planning Policy Framework** (NPPF, 2021). The Natural Environment and Rural Communities (**NERC**) Act (HM Government, 2006) also confers a legal duty on every public authority to conserve biodiversity under Section 40(1). **Cornwall Council Biodiversity Supplementary Planning Document (SPD)**, (Cornwall Council, 2018) sets out what the planning department expects from applicants when considering potential impacts upon biodiversity.

The works have potential to impact upon features that may hold roosting bats. The buildings and any surrounding trees likely to be impacted should be assessed by a bat ecologist following the Bat Conservation Trust’s *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016).

Mitigation recommendations should be provided following this further survey work: further bat survey work may be required.

4.1.6 *Badger*

Badgers and their setts are legally protected under the **Protection of Badgers Act** 1992 (HM Government, 1992).

As a precaution, any excavations left open overnight during construction should be covered or provided with a means of escape such as a sloping plank to prevent Badgers (and/or other mammals) from becoming trapped and care should be taken to ensure that no wire or other material which could present a risk of entanglement is left on site.

4.1.7 *Birds*

All birds, their young and eggs are legally protected whilst nesting under the **Wildlife & Countryside Act** 1981, as amended. Local authorities have a duty to further the conservation of UK BAP priority species under the **NERC Act** (2006), the **CROW Act** (2000) and **NPPF** (2021).

Avoid disturbance to nesting birds by undertaking any vegetation clearance affecting hedges, scattered trees or woodland (if required) during the winter months (1 October to the end of February). If this is not practicable, an ecologist must carry out a search of the vegetation by hand, immediately

before clearance. If nesting birds are found, work within 5m of the active nest must stop until the chicks have fledged. Peak nesting season is usually April to July, and works are most likely to be delayed during these months.

4.1.8 *Amphibians*

Local authorities have a duty to further the conservation of S41 priority species under the **NERC Act** (2006), the **CROW Act** (2000) and **NPPF** (2021). Legal protection under the **Wildlife & Countryside Act** 1981.

As a precaution, carry out ground works with care to avoid impacting amphibians, if present. Ideally this work should be undertaken during the active season for these species (April to October) during suitable warm weather, working in one direction (towards areas of retained habitat) so that any individuals present have a chance to move out of the way.

4.1.9 *Hedgehog*

Local authorities have a duty to further the conservation of S41 priority species under the **NERC Act** (2006), the **CROW Act** (2000) and **NPPF** (2021).

Follow guidance for amphibians above.

4.2 Potential for Site Enhancement

Under the **Environment Bill** recently passed into law (HM Government, 2021) there is a legal requirement for all development requiring planning permission to deliver at least a 10% Biodiversity Net Gain (BNG). Provision is made for this in terms of planning policy under **NPPF** (2021) in the **Cornwall Local Plan** (Cornwall Council 2016). Best practice guidance for developers is provided in the **Cornwall Planning for Biodiversity Guide** (Cornwall Council, 2018).

Following Cornwall Council guidelines (2021) the proposed development falls below the stated threshold for major development for which use of the Biodiversity Metric Calculation Tool is required. Reference to anticipated biodiversity net gain / loss resulting from the proposal is made here using professional judgement based upon comparison of the baseline Phase 1 Habitat distribution (as shown on *Map 1*) with proposals for the development as described on site by the owner (pers. comm.).

Develop plans for the proposal to include landscape enhancements such as the construction and / or planting of new hedges, trees and shrubs. Native species and/or species of known wildlife value should be favoured to provide a varied range of nectar sources and foraging opportunities for faunal species and bird nesting habitat.

Supplementary planning advice from Cornwall Council (2018) requires that specific provision is made for wildlife by the incorporation of purpose made bat and / or bird boxes and bee bricks within all new residential development. Inclusion of such features within the present development should be considered; a number of appropriate products are commercially available which could be easily and cheaply built into the proposed bungalow (further advice can be provided regarding this as required). Beyond the above, the most appropriate mitigation for bats will be informed by the results of the recommended bat survey.

The need for further enhancement to achieve BNG cannot be quantified until the further survey work recommended in this report has been completed. Other potential avenues for enhancement could include developing a programme to control the extent of invasive alien species within the surrounding CWS woodland.

Report ends.

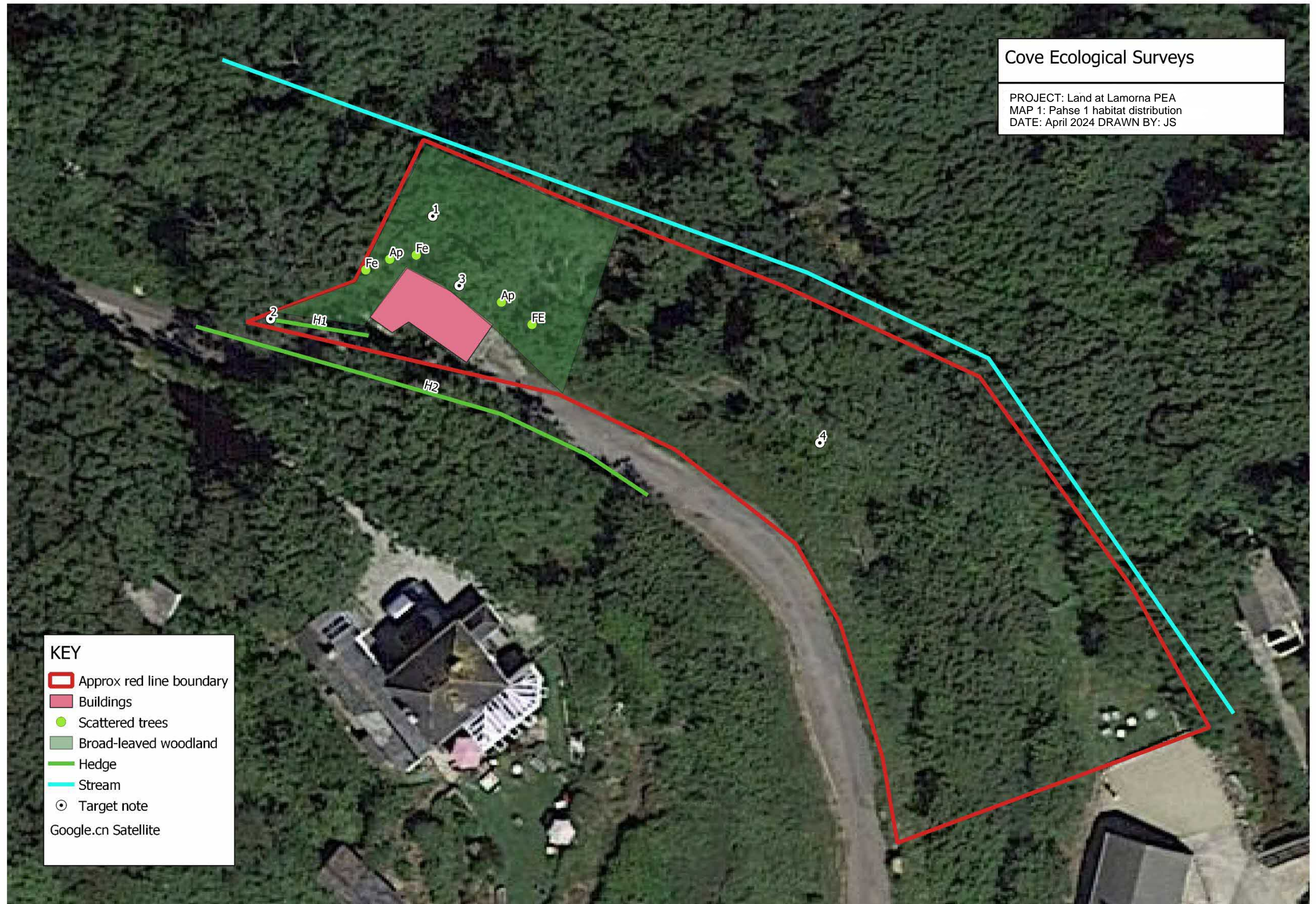
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Appendix 1:

Map 1 Phase 1 Habitat Distribution



Target Notes relating to Map 1

1. Rock exposure
2. Winter Heliotrope
3. Winter Heliotrope
4. Wider area of woodland and scrub not accessed during survey

Appendix 2: Table 1 Species list

Common Name	Latin Name	Scattered trees and Woodland	Buildings	Hedge
Three-cornered garlic	<i>Allium triquetrum</i>	O	O	A
Sweet vernal grass	<i>Anthoxanthum odoratum</i>		R	R
Lords-and-Ladies	<i>Arum maculatum</i>	O		O
Camellia	<i>Camellia sp.</i>	O		
Pendulous sedge	<i>Carex pendula</i>	R	R	
Montbretia	<i>Crococsmia x crocosmiiflora</i>	LA		LF
Cock's-foot	<i>Dactylis glomerata</i>		R	
Evergreen spindle	<i>Euonymus japonicus</i>	R		LD
Red fescue	<i>Festuca rubra</i>		R	
Ash	<i>Fraxinus excelsior</i>	A		R
Snowdrop	<i>Galanthus nivalis</i>	R		
Cleavers	<i>Galium aparine</i>	O	O	O
Herb-robert	<i>Geranium robertianum</i>	O		O
Atlantic ivy	<i>Hedera hibernica</i>	LA	F	A
Hogweed,cow parsnip	<i>Heracleum sphondylium</i>		R	R
Yorkshire fog	<i>Holcus lanatus</i>	R		O
Bluebell	<i>Hyacinthoides non-scripta</i>	O		
Hydrangea	<i>Hydrangea sp.</i>	R		O
Tutsan	<i>Hypericum androsaemum</i>	R		
A moss	<i>Kindbergia praelonga</i>	A		
Daffodils	<i>Narcissus sp.</i>			LF
Winter heliotrope	<i>Petasites fragrans</i>	LA		LA
Ribwort plantain	<i>Plantago lanceolata</i>		R	
Bracken	<i>Pteridium aquilinum</i>	R		
A moss	<i>Rhizomnium punctatum</i>	LA		
Rhododendron	<i>Rhododendron ponticum</i>	R		O
Blackberry/bramble	<i>Rubus fruticosus agg.</i>	F	O	F
Common sorrel	<i>Rumex acetosa</i>			O
Red campion	<i>Silene dioica</i>	R		O
Dandelion	<i>Taraxacum officinale agg.</i>		R	
A moss	<i>Thamnobryum alopecurum</i>	A		
A moss	<i>Thuidium tamariscinum</i>	LA		
Navelwort	<i>Umbilicus rupestris</i>	R		O
Common nettle	<i>Urtica dioica</i>	O		O
Peace-lilly	<i>Zantedeschia aethiopica</i>	R		

DAFOR is a nominative scale where: D = Dominant, A = Abundant, F = Frequent, O = Occasional and R = Rare. L = Locally, e = Edge